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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER
TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
3729	13

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

N.K.

Office Action Summary	Application No.	Applicant(s)	
	09/839,126	DEBRAAL	
	Examiner	Art Unit	
	Dexter Tugbang	3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *8 and 11-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-7 and 9-17, drawn to a process of making electrically conductive pathways, classified in class 29, subclass 846.

II. Claims 8 and 18, drawn to a product of a radio frequency tag, classified in class 343, subclass 700R.

III. Claims 19-24, drawn to a system or apparatus for assembling radio frequency tags, classified in class 29, subclass 729.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups III and II are related as apparatus and product made, respectively. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case, the product of Group II can be made by a materially different apparatus, such as one the merely has a means for coating with no heat source or no heating required at all.

3. Inventions of Groups I and II are related as process of making and product made, respectively. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product of Group II can be made by a materially different process, such as

one that applies the thermal ribbon transfer by coating techniques at normal atmospheric conditions with no heating or elevated temperatures.

4. Inventions of Groups I and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process of Group I can be performed by hand such as moving the substrate or thermal transfer ribbon transfer by hand, as opposed to the use of a conveyer as required by Group III.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. If applicant elects the invention of Group I, this application contains claims directed to the following patentably distinct species of the claimed invention:

Species A, drawn to Figure 1, Claims 1-7, 9 and 10; and

Species B, drawn to Figure 2, Claims 11-17.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic in the invention of Group I.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

7. During a telephone conversation with Mr. Joe M. Muncy on April 17, 2003, a provisional election was made with traverse to prosecute the invention of Group I, Species A, Figure 1, drawn to Claims 1-7, 9 and 10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8 and 11-24 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

8. The abstract of the disclosure is objected to because of the use of implied language of "The present invention" (line 3 of page 17). The examiner recommends replacing the recitation of "The present invention...and two methods" (lines 3-4 of page 17) with the recitation of --Two methods are provided--. Correction is required. See MPEP § 608.01(b).

9. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

10. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: A Method for Forming Electrically Conductive Pathways.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Roth 5,826,329.

Roth discloses a method of forming electrically conductive pathways comprising: providing a thermal transfer ribbon 46 (in Fig. 3); moving the thermal transfer ribbon past a heat source (thermal print head 42); engaging the thermal transfer ribbon with a receiver substrate 14 as the thermal transfer ribbon moves past the heat source 42; selectively heating portions of the

thermal transfer ribbon with the heat source (see col. 4, lines 3-10); transferring a composition from the thermal transfer ribbon to the receiver substrate, the selective heating enabling a desired pattern of the composition to be transferred to the receiver substrate (see sequence of Figures 5 and 6).

Regarding Claim 2, Roth further teaches that the composition transferred from the thermal transfer ribbon 46 is an electrically conductive material 12.

Regarding Claim 3, the composition (discussed at col. 3, lines 48-65) is considered to be an electrically conductive precursor, which becomes conductive upon application of heat from the heat source 42.

Regarding Claim 5, the thermal transfer ribbon material discussed by Roth (at col. 3, lines 5+) can be selected such that it would be fail to have magnetic particles.

Regarding Claim 9, Roth further teaches using a polymeric film (resins) as the transfer ribbon, coating the transfer ribbon with the conductive material with a wax, and using metallic inks as the composition of the thermal transfer ribbon (see co. 3, lines 9+).

13. Claims 1, 6 and 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Brady et al 5,826,328.

Brady discloses a method of forming electrically conductive pathways comprising: providing a thermal transfer ribbon (leads 115); moving the thermal transfer ribbon past a heat source (bonding head 430); engaging the thermal transfer ribbon with a receiver substrate (strips 240) as the thermal transfer ribbon moves past the heat source 430; selectively heating portions of the thermal transfer ribbon with the heat source (see Fig. 4b); transferring a composition from

the thermal transfer ribbon to the receiver substrate, the selective heating enabling a desired pattern of the composition to be transferred to the receiver substrate (see Fig. 4c).

Regarding Claim 6, Brady further teaches combining the receiver substrate 240 with a microchip 440 to form an antenna 110.

Regarding Claim 7, Brady additionally teaches that the above steps form a radio frequency tag (see col. 2, lines 62+) with the microchip 440 being affixed to the receiver substrate 240 before transferring the composition.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roth.

With respect to the specific compositions recited for the wax and binders, it would have been an obvious matter of design choice to choose any desired wax and binder since the applicant has not disclosed that the claimed compositions (recited in Claim 10) solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the composition of wax and binders taught by Roth.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dexter Tugbang whose telephone number is 703-308-7599. The examiner can normally be reached on Monday - Friday 9:00 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3590 for regular communications and 703-305-3588 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.

Dexter Tugbang
Primary Examiner
Art Unit 3729

adt
April 18, 2003